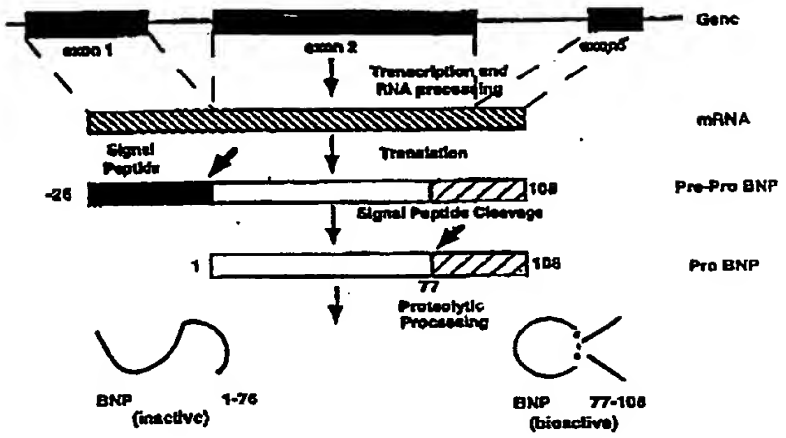

Fig1

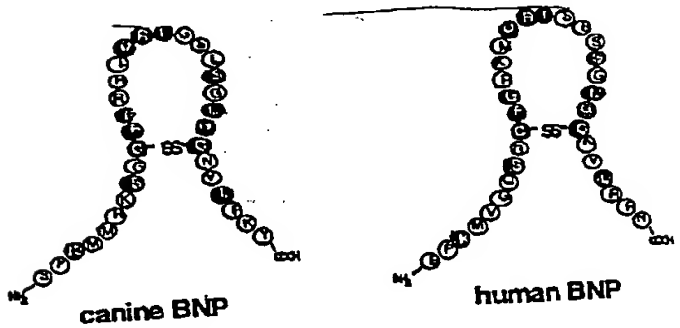

Fig2

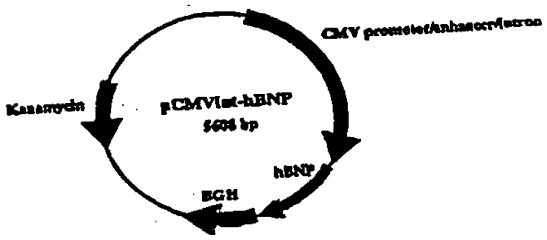

Fig3

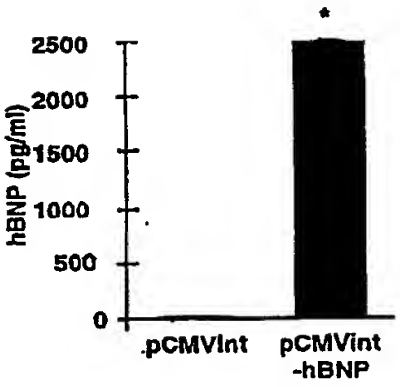

Fig 4

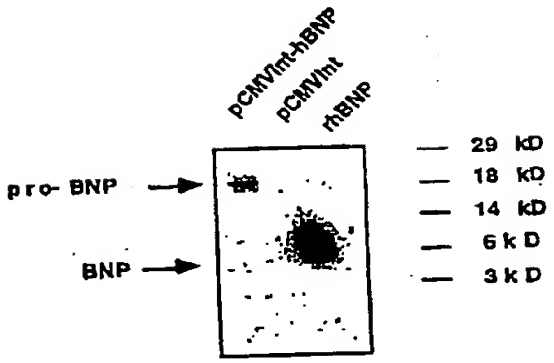

Fig 5

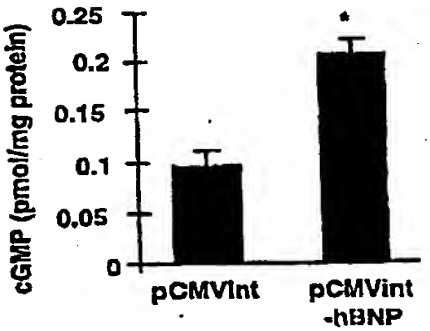

Fig 6

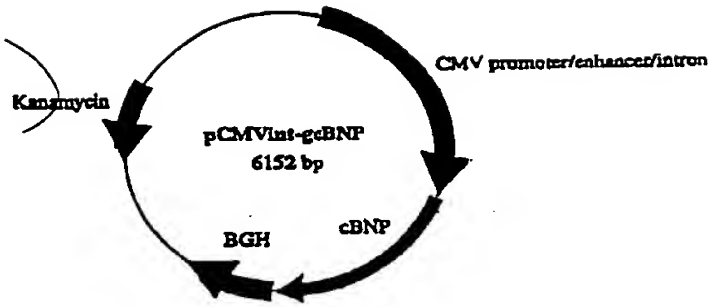

Fig 7

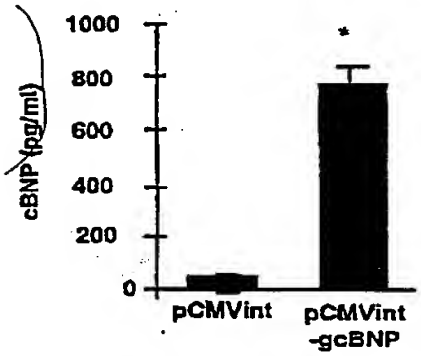

Fig 8

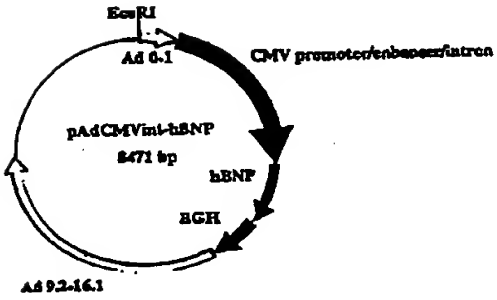

Fig 9

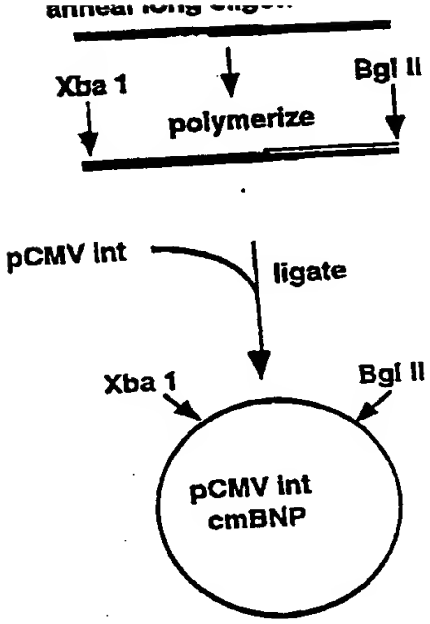
anneal long oligo
Xba 1
Bgl II
polymerize
pCMV int
ligate
Xba 1
Bgl II
pCMV int
cmBNP

Fig 10

Figure 11

Amino Acid	Codon
Phe	UUU, UUC
Ser	UCU, UCC, UCA, UCG, AGU, AGC
Tyr	UAU, UAC
Cys	UGU, UGC
Leu	UUA, UUG, CUU, CUC, CUA, CUG
Trp	UGG
Pro	CCU, CCC, CCA, CCG
His	CAU, CAC
Arg	CGU, CGC, CGA, CGG, AGA, AGG
Gln	CAA, CAG
Ile	AUU, AUC, AUA
Thr	ACU, ACC, ACA, ACG
Asn	AAU, AAC
Lys	AAA, AAG
Met	AUG
Val	GUU, GUC, GUA, GUG
Ala	GCU, GCC, GCA, GCG
Asp	GAU, GAC
Gly	GGU, GGC, GGA, GGG
Glu	GAA, GAG

FIGURE 12

Original Residue	Exemplary Substitutions	Preferred Substitutions
Ala (A)	val; leu; ile	val
Arg (R)	lys; gln; asn	lys
Asn (N)	gln; his; lys; arg	gln
Asp (D)	glu	glu
Cys (C)	ser	ser
Gln (Q)	asn	asn
Glu (E)	asp	asp
Gly (G)	pro	pro
His (H)	asn; gln; lys; arg	arg
Ile (I)	leu; val; met; ala; phe norleucine	leu
Leu (L)	norleucine; ile; val; met; ala; phe	ile
Lys (K)	arg; gln; asn	arg
Met (M)	leu; phe; ile	leu
Phe (F)	leu; val; ile; ala	leu
Pro (P)	gly	gly
Ser (S)	thr	thr
Thr (T)	ser	ser
Trp (W)	tyr	tyr
Tyr (Y)	trp; phe; thr; ser	phe
Val (V)	ile; leu; met; phe; ala; norleucine	leu

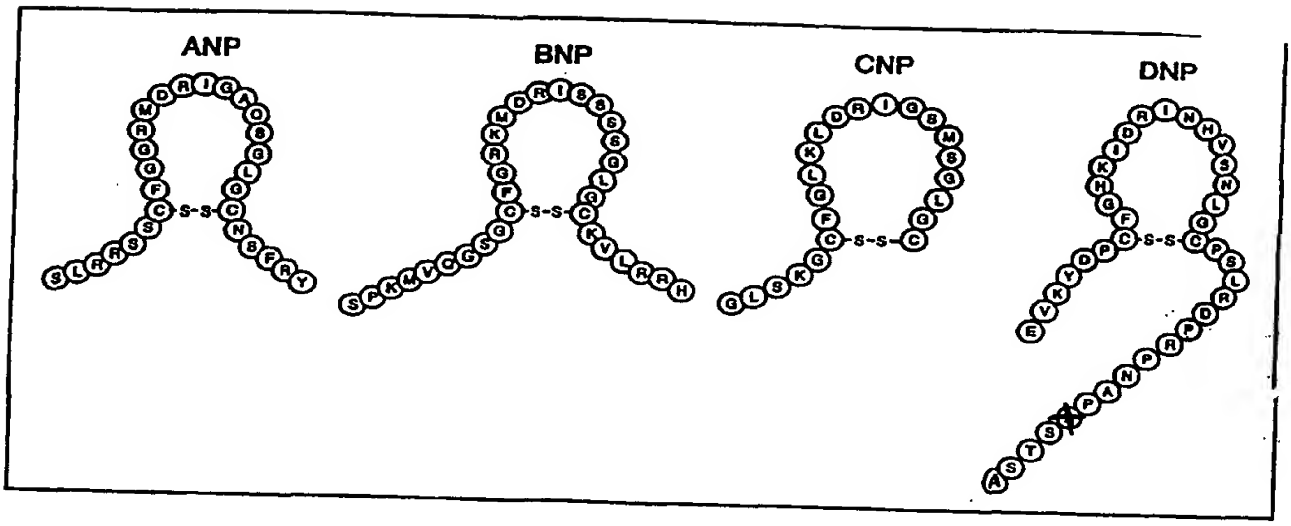

Fig. 13

A)

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EQRNHLQGKLSELQVEQTSLEPLQESPRPTGVWKSREVATEGIRGHRKMVLYTLRAPR
SPKMVQGSGCFGRKMDRISSSSGLGCKVLRRH

B)

```
   1 ctgtgagatc accccgtgct cccagcgctc acgtcggtcc tcggaaagcc ggggtcctcc
  61 ctgcctttc cagcaacggt ggggtgggga ggcaggaaga aagcgccaac ctaggacccc
 121 ggagatttgc agcaaaggaa gaagcgggag acgggcactt gtctgtgtct ccagcgcgtt
 181 cctgcccccc gccgacccgg cccatttcta tacaaggtcg ctctgcccgg tctccacctc
 241 ccacgtgcag gccgcggagg ggctcattcc cgggccctga tctcagaggc ccggaatgtg
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 361 aaaggccacg gtgtcccgag gagccaggag gagcaccccg caggctgagg gcaggtggga
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1321 caataccttc tccccacctc ctacttctta tcaaaggggc agaatctcct ttgggggtct
1381 gtttatcatt tggcagcccc ccagtggtgc agaaagagaa ccaaacattt cctcctggtt
1441 tcctctaaac tgtctatagt ctcaaaggca gagagcagga tcaccagagc aatgataatc
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1621 caccctaacc atcatcaccc tctctctttc cctgacagtg ctgaggcggc attaagagga
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1861 agctttatct tttgaaactg atttgtcttg gcgcattaaa aataatccct catttcaaag
1921 aa
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